

1.1. LESSONS FROM THE COVID-19 PANDEMIC: NEW TECHNOLOGIES AND NEW EDUCATIONAL ENVIRONMENTS

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Problems and Prospects of On-Line Education in Russia

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Abstract. The article is devoted to the problems and prospects of online education in modern Russia. The situation of the outbreak of the coronavirus pandemic has brought the process of distance learning to a new level. The author makes an attempt to analyse the main forms and methods of online education from the point of view of developing students' skills of critical literacy and the ability to form their own semantic field.

Keywords: digital education, pandemic, critical literacy, media environment, online course

1. Introduction

The world of modern man is wide and varied. The main factor shaping the information field of a modern person is undoubtedly the mass media. I will not repeat the trivial statements that we live in a world that is significantly different from what it was 50 years ago. That is why at the moment the education system is necessarily included in the modern media environment. The emergence of online education is associated with the first attempts by a number of American universities (Michigan State University, Northeastern University, University of Phoenix, etc.) to create online courses in the 80s of the XX century. (Of course, there were television educational programs before that, but we are interested in training in the online communication system). Russia, for obvious reasons, started this process much later. However, during the period of intensive development of various forms of such training (the 2000s), Russian education actively tries and implements

digital technologies in the educational process. The first attempts to implement online learning on various platforms were made back in the early 2000s [Maslakova, 2015, 29–32].

At the moment, the online education system is actively popularized and promoted by the leadership of Russian education, but the teaching community is not very active in supporting this idea. The main fears are related to the fact that in this kind of educational process, live communication disappears, global changes occur both in the learning process itself and in its content.

2. Relevance

The relevance of the study is associated, oddly enough, with the outbreak of the coronavirus pandemic. The entire educational community (from schools to higher educational institutions) found itself in a situation of a forced distance learning process. What had happened before smoothly and spontaneously enough suddenly turned out to be a harsh necessity for everyone without exception. This led to aggravating both the known problems that had arisen earlier and to the determining of the new ones. An important aspect of the analysis of the ongoing processes is the relationship between the didactic nature of the educational process and the possibility of forming a free-thinking and creatively active subject in this process. The most important problem of education is the answer to the question about the type of personality that is in demand in the modern society and the ability of the education system to respond to the challenges of a rapidly changing social reality.

3. The object

The object of this study is the process of online learning, based on modern media communication technologies, and rapidly intensified in the pandemic. First of all, we are interested in the transformation of the educational process in the online system, the problems and advantages that arise in connection with this.

4. Material

The material for the research was my personal experience of creating online courses and working with them and the experience of my colleagues in the department. In addition, in the process of teaching in the pandemic, it became possible to analyse various forms of media communication both

with students and with colleagues. I found it important to research the process not only from the teacher's point of view, but also to look at the opinions of students. In this regard, in the last week of the semester, I asked students of the Faculty of Psychology (Year 1, 120 people) as an analytical task to describe a new situation in terms of the problems and advantages of distance learning. It should be noted that the sphere of my scientific and teaching activities is the philosophy of culture and, in general, culture studies.

5. Methodology

The methodological basis of the study is the concept of critical literacy which emerged in the 70s and was significantly developed at the end of the 20th century [Frey, 1973; McLaren, 1993, etc.]. This approach is based on the idea of social equality in education and avoiding the educational model in which the relationship between a teacher and a student is built on the basis of S-O interaction and the learning outcome depends on the completeness of the learner's uptake of the information received and the texts read. The authors of the concept proceed from the fact that this kind of approach to the training system does not meet modern realities. The modern society has a high degree of mobility, both in the horizontal and temporal components. This process is becoming more complex with the development of the digital environment. The consciousness of a person immersed in the information flow should have a number of features: first, the skill of selecting and information filtration, and secondly (and this is the main thing!) the ability to critically perceive and rethink this information developing their own ways of adapting to a rapidly changing social environment.

6. Purpose of the study

So, the purpose of this study is to analyse the main forms and methods of online education from the point of view of forming students' critical literacy skills and the ability to form their own semantic space.

The first component that requires consideration are the online courses which are quite widespread in Russia. First of all, it is the national platform openedu.ru. Without going into the details of the main stages of the introduction of online courses, let us dwell on what basic advantages and problems of this form of education are known at the present time.

Firstly, this form is extremely demanding, since it allows not only covering the widest possible audience of students, but also making it possible

to attend courses of outstanding specialists in their field. In addition, with the external study mode, this is a very great help in mastering the material since the number of classroom activities is significantly limited. A qualitative online course should include both video lectures and additional printed, audio and other materials. Besides, it assumes the possibility of both student-teacher feedback and communication within the student group (peer to peer review). An important component is the presence of forms of automatic control of assignments, harmoniously combined with the assessment of creative assignments by a teacher or tutor.

Secondly, generation Z, which makes up the majority of the audience of educational programmes, is most susceptible to the media form of communication (in this case, we are not speaking about the pros and cons of this peculiarity of young people). The attractiveness of online learning is largely due to the prevailing habit of 'living online'.

Thirdly, the online course allows you to get away from archaic forms of teaching (especially in the humanitarian sphere), where the process is often reduced to the teacher's lectures and students' reports at seminars. This is one of the reasons that great hopes are pinned on this form of education. This is partly due to the conservatism of some of the teaching staff of higher education (more on this later). The habit of "broadcasting" from the lecturing desk and giving voluminous articles and monographs for reading is not very effective when working with a modern student. The main problems arising in the learning process based on online courses were discovered already at the implementation stage.

The first thing that should be noted is the student's weak motivation in the process of mastering the material or, in extreme cases, its sharp decline in the learning process. For example, in 2019, the NRU HSE (National Research University Higher School of Economics) conducted a study of the dynamics of motivation of online students and proposed a mathematical model for studying these processes. The mathematical model developed at the HSE is an extension of the Rush model (a system that allows you to measure the level of difficulty of a task and the level of students' readiness). On this basis, the NRU HSE conducted a study of online learning and found that students more often choose to watch video lectures than to read educational material. Each student, according to the research results, demonstrates individual dynamics of activity; however, scientists have identified three main types. Thus, about 85 % of students show a decrease

in activity (and 65 % will have zero activity in the second week). Only 10 % of students, according to the results obtained, continue active learning throughout the course, and only about 5 % have an increasing activity during the course. 10 % of students (with stable dynamics of activity) are most productive in solving test tasks, use fewer attempts and make fewer mistakes [Abbakumov, 2019, 137–140].

For the sake of completeness, I signed up for the HSE online course in my area of Culturology, made by V. Kurennoy, one of the most interesting researchers in this area. In my opinion, this course is quite typical for modern higher education in Russia. Besides, it is recommended for widespread use in all universities of the country since this discipline is included in the block of subjects of the general humanities direction (along with Russian History, Culture of Speech, Philosophy, etc.). Of course, this version of the course does not imply training students in the areas of Culturology and Philosophy of Culture and is designed for students of various specialties (and not only humanitarian ones). So, the course is built on the basis of video lectures provided with a presentation, and on each theme a small text is given for reading. The transition to the next theme is carried out only after completing the current control test. The final score is the sum of their results of the current tests and the performance of a volumetric test that completes the course.

The first thing that catches your eye is the overload of the course with the names and concepts of modern cultural studies. If this is an important component for a future cultural specialist or philosopher, then there is no use for an economist or a builder.

The second thing, which is important in my opinion, is that the intellectual potential of the teacher is realized very poorly, not to mention the activity of the students in the process of mastering the material. At first glance, this is the problem of the content of the course itself, which the author forms. However, this is not quite true. In 2015, we (Yurlova S., Gudova Yu.) prepared an online course *The Technology of Myth in Modern Mass Culture*, which is still used in the educational process, and so I can talk about problems from the inside. The main problem is software. In the process of preparing the material, various options for analytical and control tasks were offered, including options for mutual assessment with subsequent discussion. However, the programmers asked to transfer each proposed variant of the task to the form of testing, since this allowed the use of automatic verification. As a result, all tasks that involved other methods of assessment were given

in the form of essays, which are checked by a teacher or tutor. As correctly stated in the article ‘Artificial intelligence for education: Knowledge and its assessment in AI-enabled learning ecologies’: “By “traditional assessments, “we do not just mean pen-and-paper; we also include computer-mechanized reproductions of traditional select response and supply response assessments’ [Cope, Kalantzis and Searsmith, 2019, 12–13]. And this question formulation is quite reasonable. The test form of checking the level of mastering the material covers only the student’s short-term memory and does not require a deep *understanding* of the essence of the material. The virtuosity with which the modern generation of students solves various kinds of tests suggests that in this case short-term memory and the skill of solving test problems are formed. Quite often, a student who brilliantly solves test items writes very weak and meaningless essays on the same problem.

The second component of online education is the willingness of the higher-education teaching personnel to work in the digital format. Here, unfortunately, Russian higher education is showing an insufficient level. The average age of the teaching staff as for 2018 is 50+. At the same time, in the country as a whole, the average age of the working population is 41.1, of which only 21.5 % are over 50 [https://www.gks.ru/storage/mediabank/Trud_2019.pdf]. Undoubtedly, the age composition of university teachers differs both in regions (Moscow, St. Petersburg are much younger) and in particular educational institutions. In addition, humanitarian specialties are traditionally represented by more mature, and therefore, older teachers. So, the average age of the teaching staff of UrFU is 49.1, and this indicator has not changed significantly over the past 5 years [Goncharova, 2018, 116].

In fact, this means that these people received education during the period of the dominance of book culture [McLuen, 2005], and the process of mastering the work with modern media took place mainly spontaneously and on the basis of self-study. This is undoubtedly one of the serious problems exacerbated during the pandemic. For a long time, the process of digitalization of the Russian education system bumped up not only against the weakness of the software, but also against the reluctance of older teachers to master and apply modern forms of online education. A significant part of the professors and associate professors of this age group continued to use only traditional forms of education (lectures, seminars) ignoring the new opportunities offered by digital media. In the situation of the transition to distance learning, which suddenly fell upon Russian universities and schools, many were

intellectually and technically unprepared for such a situation. Online education requires a different approach to the material offered to students, and understanding that the new generation perceives information differently, it is difficult for them to master voluminous printed texts, they require visualization and problematization of information. Working in a familiar model (video lectures, printed versions of lecture material, webinars), the teacher essentially remains within the framework of the traditional teaching model. This leads to a number of consequences: first, the load on the teacher multiplies; secondly, the student quickly loses motivation for learning, which means that it is necessary to quickly restructure and offer other, more modern ways of presenting the material.

The arrival of the pandemic dramatically changed the situation and, frankly, caught the education system by surprise. Of course, the appearance of a significant part of the problems was expected, but in some cases the consequences were unexpected.

Let's start with the expected problems. The first thing that universities encountered was the training technology and software for distance education. Of course, every large (and not so) university in Russia has a number of educational platforms for conducting online classes, conferences, etc. However, before the 'X hour', the workload of these platforms was not high; the same refers to Internet traffic. With the advent of the pandemic, the load has increased many times and, of course, this has led to periodic failures in the work of resources and platforms. The second problem was that to work in the online system, any programme must be provided with the necessary materials — recorded video or audio lectures, a set of control and analytical tasks, ready-made text and video materials, etc. In most cases, there were no such materials; therefore, the preparation process took place in a situation of force majeure. With the benefit of my personal experience, I can say that developing content for a full-fledged online course requires painstaking and thoughtful work for several months. And this is provided that the course has been read live several times and there is experience in analysing the perception of its content by students. Half of the courses taught by the teachers of our department were not fully provided with the necessary materials. The main result of this situation was the emergence of insufficient quality content. Of course, the processing and preparation of new material gradually took place, but the need to form ready-made content on a weekly basis in several courses could not but affect its quality.

At the beginning of the process of transition to distance learning, many were confident that this process would be easy enough. However, it presented many surprises, both to teachers and students.

We need to start with a simple thing, providing teachers and students with the necessary technical support (a computer with a webcam, fast Internet, etc.). In most cases, the remote learning process took place not only from desktops and laptops, but also from tablets and smartphones. Not every teacher at that time had the necessary set of software and additional equipment at home for full-fledged work. For the sake of fairness, it should be said that the authorities of the regions and universities quickly created conditions for free connection to all necessary platforms (Zoom, Google Meet, Microsoft Teams, etc.) Students found themselves in a more difficult situation: if university teachers live in a metropolis, many non-resident students, while staying at home, experienced difficulties with Internet communication and often had to use smartphones. Despite the fact that the younger generation is fluent in media communication in all its variants, difficulties arose in the educational process. So, participation in a webinar from a smartphone is extremely difficult, as well as reading a voluminous text.

Consistency and proportionality of the load for both the student and the teacher play an important role in the educational process. At first glance, the remote nature of the process should have made the learning process easier. Indeed, there is no need to spend a lot of time on trips to the place of study, studying at home makes it possible to more freely manage your time. However, the first thing that the online learning process revealed was the manifold increased workload on the teaching staff and moderators of the educational process. Let's take a typical situation as an example. In the modern system of Russian education, a significant role is played by the study of general subjects (Philosophy, Russian History, Cultural Studies, etc.). As a rule, these courses are taught to a large number of students at the same time (60–100 people) and lectures are the main form of training. In addition, several control events are carried out during the semester and the final test completes this process. Now let's imagine a teacher who has two or three groups of students of 60–100 people and works remotely. The first problem is that it is necessary to somehow track the process of mastering the material (for example, the program in which I worked does not allow me to see whether the student has watched the proposed material and whether he listened to a video lecture). In this situation, the teacher is forced to give

at least a minimum control task that is not provided for in the curriculum. And this multiplies the load and there is no longer any question of any creative approach in our teaching. As a result, students receive weekly test assignments for each discipline, which must be completed within a certain time frame. Of course, to help the situation of force majeure, most of the tasks were given in a test form, which has its own limitations. However, this process also has a positive aspect. The student is forced not only to work harder, but also to show more independence in the learning process. If in the process of working at a seminar in the classroom it is possible to 'sit it out' without participating in the discussion of the proposed problems, then in the conditions of distance learning each task must be completed by everyone. This led to the fact that when answering the question 'what difficulties did you face in the process of distance learning?' 70 % of the students indicated the need for very good self-organisation.

One of the serious problems in the online mode was the impossibility of checking the real level of mastering the material by students. In the case when the control task is given in the form of a test or writing an essay, it is impossible to track whether the work was done independently or whether the student used the endless possibilities of the Internet to download ready-made answers. An experienced teacher, of course, can identify this kind of work, but it is not uncommon for a number of students to have identical essay texts. From this we can conclude that in the process of preparing the control task, many students follow the path of least resistance and take ready-made texts or their fragments.

At first glance, working in the videoconference mode should remove this problem, since during the seminar the teacher sees and hears all the participants and can actively interact with them. Yet in fact, another problem was revealed, at any time, a student can 'exit' the conference by turning off the camera and replacing his video image with the 'portrait' mode. In this case, it is impossible to understand whether the student is present in class or not, and it is almost impossible to check it.

An important characteristic of live communication in the classroom is the opportunity to adjust the presentation of educational material during the educational process. Each student group has its own creative potential and features associated with their main educational profile. It is impossible to teach the same material to future psychologists or future builders in the same way. In addition, with each new generation of students, the pat-

tern of the perception of the same material also changes. When it comes to online courses, of course, the possibilities for adjusting the content are significantly limited.

These are the problems that arise in the learning process from the point of view of the teacher.

As mentioned above, I tried to investigate this situation from both sides. I have analysed 120 essays of 1st year students of the Faculty of Psychology which formulated their vision of the problems and prospects of online learning.

The general conclusions are as follows:

Advantages: 1) saving time since there is no need to go to university; more comfortable home environment; 2) the opportunity to master the material at your own pace; 3) all work is performed in an electronic format, which reduces the execution time, allows you to keep them all in one place and if necessary, return to the covered material; 4) availability of specific platforms and resources for providing feedback; 5) the forced transition to distance learning is an important experience that should not be overlooked in the future.

Problems: 1) the need for high self-organisation and decreased motivation in the educational process; 2) a decrease in the information content of the lecture material (especially if it is given in the form of a printed text), the inability to ask questions to the teacher; 3) a multiple increase in independent work; 4) lack of live communication with both the teacher and students, which reduces the effectiveness of teaching, lack of discussions; 5) the loss of a living intellectual environment that exists at the university which plays an important role in the educational process.

7. Analysis of the material

Now it is necessary to analyse the changes that have occurred in terms of the effectiveness of the educational process. The main thing that is important to understand is to what extent online learning contributes to the retreat from the didactic approach and contributes to the formation of creative and analytical thinking of students.

Summarizing the advantages of online learning, which are indicated by both teachers and students, first of all, one should point out the inevitable weakening of instructional and narrative forms and the increased need for independent study of the material. The situation of the pandemic led to the fact that the teaching community very quickly and effectively began to be in-

volved in the new communication environment. Of course, the difficulties of this process are obvious. This is especially true for teachers of the older generation; however, they have mastered various platforms in a few months of remote work. Before the pandemic, the main form of online communication between a student and a teacher was limited to the exchange of emails, at best, to the creation of temporary groups on social networks (Vkontakte, Facebook) to conduct classes or control on certain themes. Today, the overwhelming majority of teachers can be quickly involved in new systems and can master the work on new digital platforms. This provides undeniable advantages in the volume and variety of content presented on platforms such as Microsoft Teams or Google Meet. In a situation where in many higher educational institutions not all classrooms are provided with a sufficient set of multimedia equipment, this makes it possible to operate both with visual material and give complex tasks for control.

A modern person, especially a young person, has a certain experience of communication, and this experience differs significantly from the communicative experience that is formed in book culture. Being immersed in a digital environment, he has the ability to quickly assimilate a variety of information, which of course is superficial. In modern communication, written and spoken text is gradually being replaced by convergent, and texts acquire new qualities. They '... become multimedia, interactive, polymorphic, hypertext, and reading — not only book learned, newspaper or magazine, but along with this screen and mobile, multimedia, interactive, hypertextual' [Gudova, 2015, 21].

Human thinking, working with these kind of texts, possesses polymorphism and, as a result, the perception of information given in traditional written or oral form causes difficulty. So, the visualization of information has become an integral part of any communication in the educational process, any teacher will say that a presentation is an indispensable element of modern teaching, even if you are setting out the foundations of the philosophy of Immanuel Kant.

The main feature of the existing communicative environment is not only globality or diversity; multi-meaning is its key characteristic. The equality of any content in the media environment leads to the fact that the perceiver finds himself in a situation of constant choice and the need to somehow structure the information received. Of course, modern media technologies have their own resources and methods of content promotion. However, when it comes to the educational process, a contradiction arises between every-

day communication practices in the digital environment and the objectives of the educational process. In the traditional form of education, the student clearly knows what and where he should read, what aspects of the problem to study, etc. This does not happen at the moment. Even if the teacher suggests a specific list of sources, the student goes his own way, simplifying the task, often using secondary sources found on the Web. It is well known that for any question asked in a search engine, the first line will be such a dubious source as Wikipedia. You can urge students as much as you like not to use this source, but this is inevitable in the established communication practices.

8. Conclusion

Let us ask ourselves a question — is the online learning system capable of changing the approach to teaching and making it more relevant to both the modern digital environment and the established communication practices?

Online education opportunities are extremely wide and varied. The advantages of the new learning technologies discussed above are undeniable. However, in the real practice of Russian education they are implemented rather poorly. This is due not only to the problems of hardware or software, but also to the insufficient readiness of the teaching community to more actively use new opportunities. Conservatism and unwillingness to abandon the usual forms and methods of a significant part of the teaching community, in my opinion, are explained by two points.

Firstly, there are fears that the entire learning process will be brought online. This is confirmed by the Open Letter to V.V. Putin against Digitalization of Education [<https://gordonsons.ru/podpisat-otkrytoe-pismo-v-v-putinu-protiv-cifrovizacii-obrazovaniya-v-rf/>]. Despite its biases and tendentiousness, this text captures the existing sentiments of a part of Russian society. Indeed, the disappearance of live communication in the educational process and the possibility of immersion in the intellectual environment which is extremely important for the formation of a creative personality, will lead to a narrowing of the productive semantic field and depersonalisation of the educational process. Even in the case of direct interaction with students in the videoconference mode, the teacher is largely perceived as a media character, which leads to losing the authority of the university and likens the educational process to the communication on Instagram.

When we talk about the overload of teachers that has arisen in the new circumstances, it must be said that the solution to the problem lies in two

dimensions. The first is software and how efficiently it is used. To remove the problem of overloading teachers and free up time for creative work, it is necessary to introduce systems that would allow automatic checking not only of test assignments, but also of text materials given by students (for example, content analysis that allows you to cut off texts that do not correspond to the topic of the assignment). In addition, it is necessary to widely use the 'peer to peer review' type of assignment, which certainly not only removes a part of the load from the teacher, but also stimulates the student to master the material more meaningfully. However, much more significant is the change in the educational paradigm. In a digital environment, the principles and methods of presenting educational material should be based on the 'problem field'. The task of the teacher is to form an information field corresponding to the goals and objectives of a particular course, and in addition, to formulate methods for differentiating the information flow. The student should be able to freely search for solutions to problems, but in the field that is set by the educational process. In fact, this means fundamentally different ways of presenting material and controlling the work progress. Independent 'acquisition of knowledge' and the formation of the students' own semantic field should become the basis of the modern educational process. This requires of a modern teacher a lot of work on the analysis of the necessary content both in its classical form (written text) and in modern methods of functioning information (TV, blogosphere etc.). Only with such an approach can we hope for the emergence of a new digital generation that has not lost the ability for independent analytical and creative thinking. It is important to emphasize that the principles of online learning should complement and enrich the living process of education within the walls of the university.

The invaluable experience of working in the pandemic has allowed the Russian education system to make a breakthrough in the digital learning system, and this experience cannot be lost in the future.

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